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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/263,125 06/21/94 KATAYANAGI

K SONYP4412

EXAMINER  
CHOWDHURY, I

E3M1/0520

ART UNIT PAPER NUMBER

6

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2308

DATE MAILED: 05/20/96

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 2/26/96 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.                 | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/>   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-22 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☒ Claims 1-22 are rejected.

5. ☐ Claims \_\_\_\_\_ are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

**EXAMINER'S ACTION**

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**Part III DETAILED ACTION**

1. The amended title, specification, and drawing submitted 2/26/96 have been approved by the examiner.
2. The Claim Objections given in paragraph 2 and 112 2nd paragraph rejection given in paragraph 3 have been overcome.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

4. Claims 1 and 17-22 rejected under 35 U.S.C. § 103 as being unpatentable over Borth et al. (4,628,529) in view of Hung et al. (5,111,454).

As per Claims 1 and 17, these claim are rejected under the same rationale used in paragraph 5 of paper number 3.

Further as per Claim 1, Borth et al. shows limitations a), b) and c) given in paragraph 5 of paper number 3 but does not show a vector sum excited linear prediction (VSELP) encoder for compressing input and a transmitting and receiving circuit for transmitting the compressed speech signals and for receiving the compressed speech signals. Hung et al. shows a vector sum excited linear prediction (VSELP) encoder for compressing input (his col 2, lines 59-68) and a transmitting and receiving circuit for transmitting the compressed speech signals and for receiving

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the compressed speech signals (his col 8, lines 18-51 in which radio transmission on a first radio carrier frequency and reception on a radio carrier frequency is taught and also figure 1) in an analogous art for the purpose of digital cellular TDM 6:1 packing. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use VSELP coding for a transmitter/receiver input to noise domain detection means because this algorithm performs superior encoding with reduced computational complexity, noise and channel error. Further, VSELP coding is an industry standard in digital cellular telephones and other encoding arts.

As per Claims 18-22, these claim are rejected under the same rationale used in paragraph 5 of paper number 3.

5. Claims 2-16 rejected under 35 U.S.C. § 103 as being unpatentable over Borth et al. (4,628,529) in view of Hung et al. (5,111,454) as applied to claim 1 above, and further in view of Gerson et al. ("Vector Sum Excited Linear Prediction (VSELP) Speech Coding at 8KBPS").

As per Claims 2-16, these claim are rejected under the same rationale used in paragraph 7 of paper number 3.

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*Response to Amendment*

6. Applicant's arguments with respect to claims 1-22 have been considered but are deemed to be moot in view of the new grounds of rejection.

*Conclusion*

7. Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Indranil Chowdhury whose telephone number is (703) 305-3868.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allen R. MacDonald, can be reached on (703) 305-9708. The facsimile phone number for this group is (703) 308-5356.


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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

IC  
May 16, 1996



ALLEN R. MACDONALD  
SUPERVISORY PATENT EXAMINER  
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